(19) World Intellectual Property **Organization** International Bureau



I BERKE KUNSON NEDEKE UNIK BUKK BUKK BIKK DIK 18 KH BERKE UNIK BUKK BUKK BUKH BIKK BUKK BUKK BUKK BUKK BUKK BUK

(43) International Publication Date 7 April 2005 (07.04.2005)

PCT

(10) International Publication Number **WO 2005/030946 A1**

(51) International Patent Classification7: 5/10, C12Q 1/68, G01N 33/48, 33/50

C12N 9/10,

(21) International Application Number:

PCT/EP2004/010390

(22) International Filing Date:

16 September 2004 (16.09.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 03021636.0

26 September 2003 (26.09.2003)

(71) Applicant (for all designated States except US): BAYER HEALTHCARE AG [DE/DE]; 51368 Leverkusen (DE).

(72) Inventors; and

- (75) Inventors/Applicants (for US only): GOLZ, Stefan [DE/DE]; Bückmannsmühle 46, 45326 Essen (DE). BRÜGGEMEIER, UIf [DE/DE]; Leysiefen 20, 42799 Leichlingen (DE). GEERTS, Andreas [DE/DE]; Schuckertstr. 29, 42113 Wuppertal (DE).
- (74) Common Representative: BAYER HEALTHCARE AG; Law and Patents, Patents and Licensing, 51368 Leverkusen (DE).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: ACYLGLYCEROL ACYLTRANSFERASE-LIKE PROTEIN MGAT-X2 AND USES THEREOF

(57) Abstract: The present invention is directed to a polynucleotide and polypeptide sequence of a novel acylglycerol acyltransferase-like protein MGAT-X2. The invention also provides the human MGAT-X2 associated with the cardiovascular diseases, metabolic diseases, muscle-skeleton disorders or dermatological diseases. The invention also provides assays for the identification of compounds useful for the modulation of cardiovascular diseases, dermatological diseases, metabolic diseases or muscle-skeleton disorders for treating of cardiovascular diseases, metabolic diseases, muscle-skeleton disorders or dermatological diseases associated with expression of the MGAT-X2. The invention also features compounds which bind to and/or activate or inhibit the activity of MGAT-X2 as well as pharmaceutical compositions comprising such compounds.

